

Working Draft

Draft Concept Paper
Preliminary Watershed Evaluation and Mitigation Plan

June 7, 2000

Introduction

This paper outlines the concept of a Preliminary Watershed Evaluation and Mitigation Plan (PWEMP) for consideration by the Board of Forestry and Fire Protection. The intent is to provide timberland managers with a focused approach to evaluating watershed conditions, developing mitigations to maintain or improve watershed conditions, and developing and implementing harvesting plans based on the evaluation and mitigations. This process is also intended to develop significant watershed data that will be incorporated into more detailed, future watershed assessments and analyses.

The PWEMP is not intended to be a comprehensive assessment of watershed conditions. It is intended to provide a rapid technique to identify and develop mitigations to address the most critical watershed and site-specific needs to maintain or enhance conditions for listed salmonids and beneficial uses of water.

The PWEMP is intended to provide an approach to addressing watershed and listed salmon issues that can be implemented quickly and effectively by landowners, and evaluated by review team agencies and CDF. Over the longer term, the Board will work closely with landowners and the review team agencies to develop a more comprehensive watershed assessment/ analysis approach. Information generated through PWEMPs could provide an important input to these assessments/analyses.

Relationship to THP

A PWEMP would be attached to and guide the development of mitigations to be conducted in a THP or groups of THPs in a watershed.

Area of Application

The PWEMP approach would be applicable on watersheds with threatened or impaired values, i.e., watersheds with listed salmon species.

PWEMPs as an Optional Alternative to Baseline Prescriptions

PWEMPs are intended to provide an optional alternative approach to harvest planning that landowners can follow instead of compliance with a baseline set of prescriptions that could be similar to the current interim rules or some other rule set, as determined

by the Board. Landowner submission of PWEMPS would be the route to the development and implementation of timber operations and mitigations that depart from the interim prescription standards.

Landowners with approved aquatic habitat conservation plans (HCPs) covering listed salmonids would be exempted from interim prescriptive standards and PWEMP preparation to the extent that the HCPs address the protection of listed salmonids and water beneficial uses.

Submitter is Encouraged to Confer

The submitter is encouraged to confer with responsible federal, state, local agencies, other landowners, watershed groups, recognized local watershed experts, and members of the public before or during the process of preparing a PWEMP.

If the submitter chooses to confer with parties, as described above, the submitter shall provide in the PWEMP a list of the parties contacted and a summary of the issues discussed and comments received.

Public Notice

The submitter would be required to provide public notice of intent to prepare a PWEMP at least 60 days prior to the intended date of submission. Notice shall be published in a newspaper of general circulation in the vicinity of the subject watershed.

Expertise Necessary

As needed to supplement RPF expertise, PWEMPs will be prepared with the participation of individuals with experience and expertise in geology, hydrology, fisheries biology, fluvial geomorphology, and related disciplines. The use of interdisciplinary teams is strongly encouraged, as needed, taking into account practicality and reasonableness.

Evaluation Area

The evaluation area shall be:

- no smaller than a second-order watershed with a Class I stream (if present);
- no larger than a CALWATER planing watershed, unless the reasons for a larger unit are explained and justified in the PWEMP;
- comprised of a functioning hydrologic unit.

Standards for PWEMPs

Methods must support findings In conducting the PWEMP, the submitter shall provide documentation of the information and evaluation approaches used to reach the findings and mitigations presented. Information and evaluation methods must be adequate to support the findings and mitigations. Scientifically or professionally accepted approaches shall be used.

Field level assessment and information PWEMPs will be conducted with a field component that provides adequate watershed-area and site-specific information to support the evaluation and conclusions about the mitigations developed for the ownership. This type of evaluation will be flexible, allowing staff to invest their time in gathering data as warranted by the nature of the questions to be answered and the watershed situations to be resolved, and to focus more attention on critical questions or situations where needed. Field data collection is expected for the submitter's ownership within the evaluation area and may be combined with field data from other landowners in the watershed.

Practicality and reasonableness The sufficiency of information and evaluation necessary in the PWEMP shall be guided by the principles of practicality and reasonableness considering the size of the ownership, publicly available information, information available within the organization and allied associations, costs of collecting new information, and the risks posed by the scope and intensity of anticipated management activities. The level of information and evaluation required shall be reasonable given the ability of the submitter to obtain information about and physical access to various parts of the evaluation area.

Adaptive management approach. PWEMPs shall use an adaptive management approach over time, wherein re-use and revision of previous PWEMPs will incorporate more recently developed information and the results from various monitoring efforts.

Contents of PWEMPs

PWEMPs shall address the following topics to the extent appropriate for the evaluation area:

1. Sediment Sources (with a primary emphasis on anthropogenic sources)
 - A. Identification on a map of historic, current, and planned roads (including characteristics such as known problem locations, surfacing, insloping or outsloping, and other relevant characteristics), watercourse crossings (including storm passage design, fill failure protection, diversion potential) and landings;
 - B. Identification on a map of where historic, current and potential future management features (such as roads, landings, and harvest areas) are coincident with areas of potential slope instability (based field observation and on Division of Mines and Geology maps and shallow slope instability models, such as SHALSTAB maps provided by CDF);
 - C. A quantitative estimate of the surface area of current roads, stream crossings, and landings;

- D. Identification of sediment transport corridors leading directly to watercourses;
 - E. Identification of opportunities to divert road drainage (including water and sediment) from direct input to streams;
 - F. Map and report estimated acres (i) treated with burning and mechanical site preparation methods and (ii) substantially damaged by fire for past 10 years and projected for the future 10 years;
 - G. A verification of the historic harvest areas provided by CDF identifying harvest areas by silvicultural system;
 - H. For each of items A-F, above, provide a discussion of the sediment delivery potential of these features and propose mitigations to avoid or reduce sediment delivery from these features.
2. Aquatic and Near-Stream Habitat
- A. An aquatic habitat type map for all Class I streams within the ownership;
 - B. For Class I and II watercourses, a sampling inventory of watercourse features such as fish passage restrictions, aggradation, downcutting, scour, bank cutting, large woody debris or boulder based pool structure;
 - C. A discussion of habitat typing and watercourse feature findings, including large woody debris, presence of sediment in the stream channel, availability and filling of pools, availability and quality of spawning gravels, and other key fish habitat features;
 - D. A map or narrative summary by stream segment(s) of vegetation structure (e.g., large trees, tree diameter, canopy closure, canopy layers) and composition (e.g., hardwood and conifer species, age) (i.e., vegetation conditions relative to large woody debris recruitment, stream temperature, nutrient inputs, sediment and overland flow dissipation) within standard WLPZ distances, or wider, of Class I and Class II streams;
 - E. Identification of water diversions, drafting, impoundments, and other flow alterations;
 - F. For each of the above items, provide a discussion of salmonid habitat and water beneficial use implications and propose mitigations to maintain or improve conditions.
3. A synthesis of findings and conclusions (working hypotheses) about limiting factors for anadromous salmonids and beneficial uses of water, linkages between management activities and resource conditions, goals for watershed conditions, and mitigations to be applied to attain these goals.
4. A mitigation and monitoring plan extending for a period of 8 to 15 years after the approval of the plan.

Digital Submission of PWEMPs

Landowners are required to submit their PWEMPs in a standard digital format acceptable to CDF to facilitate review and the development of an electronic information base for future assessment efforts on the subject watersheds.

Review of PWEMPs

Time period for review Since PWEMPs are optional, the Board could require that landowners choosing to do PWEMPs agree to a longer review period than statutorily provided for THPs. Longer review periods would provide agencies and the public adequate time to review and comments on PWEMPs. A review period of at least 60 days would be reasonable.

Reviewers of PWEMPs shall have appropriate expertise The Department shall ensure that PWEMPs are reviewed by staff with watershed expertise.

Sufficiency of information The sufficiency of PWEMPs shall be judged in light of what is reasonably feasible and necessary to evaluate potentially significant environmental effects on the resources of concern.

Re-use of PWEMPs submitted for previous harvest operations A landowner may revise a previously submitted and approved PWEMP for subsequent timber operations on a watershed. Revisions must reflect any significant changes in watershed conditions; results of monitoring conducted under earlier PWEMPs; significant, newly available information; changes in mitigations proposed; and the new timber operations being proposed.

Additional Monitoring Requirements

Compliance monitoring—expanded completion report PWEMP compliance monitoring will be carried out at the plan enforcement level. At the conclusion of operations, the PWEMP submitter shall file an expanded completion report that lists the evaluation-generated prescriptions called for in the PWEMP and confirm their implementation; CDF will verify via completion inspection.

Effectiveness monitoring PWEMP mitigation effectiveness monitoring and watershed trend monitoring will be carried out according to the PWEMP and a part of updating and re-using PWEMPs for subsequent timber operations over time. This monitoring may be accomplished through individual landowner efforts, cooperative agency and landowner agreements; CDF inspections for mitigation maintenance; and Monitoring Study Group efforts to evaluate the implementation and effectiveness of Forest Practice Rules and, to the extent feasible, prescriptions developed by submitter.

Programmatic monitoring External scientific review of the PWEMP process, products, and results will be conducted at the end of the first and second years of implementation.

Use of monitoring results in subsequent PWEMPs and future watershed analyses PWEMPs shall use an adaptive management approach over time, wherein re-use and revision of previous PWEMPs will incorporate the results from various monitoring

efforts. When more in-depth watershed assessments/analyses are conducted at a later time, the information generated by PWEMPs and their monitoring processes shall be incorporated into those documents.